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Research Paper

Digital Payment Intention among Clean Agricultural Product Household Businesses in Vietnam's Mekong Delta

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Abstract

Digital transformation has accelerated the adoption of digital payment systems across commercial sectors, including transactions involving clean agricultural products. However, the factors associated with the intention of household businesses to adopt digital payments remain poorly understood, particularly in developing agricultural economies. This study examines the factors influencing the intention of household businesses to choose digital payments for clean agricultural product transactions in Vietnam's Mekong Delta. Quantitative research design was employed using survey data from 290 household businesses, and the proposed model was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings show that trust is the strongest positive predictor of digital payment intention, followed by perceived usefulness and customer demand. In contrast, social influence has a statistically significant negative relationship with digital payment intention, contrary to the hypothesized positive direction. These findings indicate that confidence in payment systems, perceived functional benefits, and customer-driven market pressure are important in encouraging digital payment adoption, whereas prevailing social norms may constrain adoption in the study context. This study contributes empirical evidence to the digital payment literature by distinguishing market-driven customer demand from community-based social influence in explaining household businesses' adoption of clean agricultural product transactions. The findings also provide practical implications for strengthening trust, communicating the functional benefits of digital payments, and addressing contextual barriers to digital transformation in the agricultural sector.

Keywords: *Clean Agricultural Products, Digital Payment Intention, Household Businesses, Technology Adoption, Agricultural Digitalization, Mekong Delta*

INTRODUCTION

In the context of global digital transformation, digital payments have become an important mechanism for improving transaction efficiency, reducing transaction frictions, and expanding access to formal financial services, particularly in developing economies (OECD, 2020; World Bank, 2025). The expansion of non-cash payments in Vietnam has been promoted as part of financial modernization and digital economic development (Tuấn, 2024). Digital payments can facilitate faster transactions, improve payment transparency, and support the traceability and governance of agricultural value chains in agricultural transactions. These functions are particularly relevant to clean agricultural products, where product safety, transparency, and consumer trust are important market considerations. However, many small household businesses in Vietnam's agricultural sector continue to rely on cash-based transactions, limiting their integration into emerging digital business environments. Recent evidence also shows that adoption of digital payment among microenterprises remains uneven, indicating that technological availability alone does not guarantee adoption (Widayani et al., 2023). Thus, understanding the factors associated with the

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intention of household businesses to choose digital payments is important for explaining digital transformation at the micro-business level.

The Mekong Delta is a strategic agricultural production region of Vietnam and an important source of agricultural products for domestic and export markets. The region is also increasingly involved in agricultural digital transformation, including digital technologies for production, supply-chain management, and product traceability. Nevertheless, the transition remains uneven across agricultural actors, particularly between larger enterprises and small household-based businesses (Nguyen et al., 2020). This issue is relevant to clean agricultural product transactions because household businesses often operate through localized markets and relationship-based exchanges, while simultaneously facing increasing pressure to respond to changing customer expectations and digital payment practices. Vietnam's policy agenda has also strengthened the development of non-cash payments through the national scheme for the period 2021–2025 and subsequent regulatory measures (Prime Minister of Vietnam, 2021; Government of Vietnam, 2024). These developments create a relevant institutional context for examining why some household businesses intend to move from cash toward digital payment methods.

Therefore, in clean agricultural product transactions, digital payment should be understood not simply as a technological option but as part of the interaction between household businesses and their customers. The decision to use a digital payment method may reflect perceived functional benefits, confidence in the payment system, and social expectations; however, these factors do not necessarily represent the same mechanism. Research on technology acceptance emphasizes perceptions of usefulness and social influence as relevant explanations of adoption intentions (Davis, 1989; Venkatesh et al., 2003). Recent research on e-payment adoption in Vietnam likewise confirms the relevance of perceived benefits, trust, facilitating conditions, and social influence, while studies of microentrepreneurs show that adoption factors can vary across business contexts (Nguyen et al., 2020; Kusumawati et al., 2024). In this study, customer demand is conceptualized differently from social influence. Customer demand represents market-driven pressure arising from customers' preferences and expectations for digital payment options, whereas social influence refers to perceived expectations or behavioral norms originating from people and business networks surrounding the household business. This distinction is important because customers may directly request or prefer digital payment as part of the transaction, whereas social influence operates through interpersonal or community-based expectations. Accordingly, customer demand represents an external market mechanism that extends the conventional technology acceptance perspective toward the customer–business interface, rather than merely duplicating the social influence construct.

Although digital payment adoption has received increasing scholarly attention, several gaps remain. First, existing studies have largely examined consumers, formal firms, or general SME populations, while household businesses operating in agricultural markets have received less attention (Moghavvemi et al., 2021; Nguyen et al., 2020). Second, relatively limited research has examined digital payment intention specifically in clean agricultural product transactions, where transaction relationships, customer expectations, and trust may differ from those in conventional commercial settings. Third, empirical evidence from the Mekong Delta remains limited despite the region's strategic importance to Vietnam's agricultural economy and its ongoing digital transformation. Finally, existing technology acceptance models mainly emphasize individual perceptions and social influence, providing less explanation of how direct customer demand functions as a market-driven pressure on business-level technology adoption.

To address these gaps, this study examines the factors associated with the intention of household businesses to choose digital payments in clean agricultural product transactions in the Mekong Delta. Drawing on TAM and UTAUT and extending these perspectives with customer

demand, trust, and social influence, the study distinguishes functional, market-driven, trust-based, and social mechanisms underlying digital payment intention. Therefore, the study addresses the following research question: What factors are significantly associated with the intention of household businesses to choose digital payments in clean agricultural product transactions in Vietnam's Mekong Delta? The study applies PLS-SEM to survey data from household businesses in Can Tho City and Vinh Long Province. This study contributes by examining digital payment intention at the household-business level and by distinguishing customer-driven market pressure from community-based social influence. The findings also provide practical implications for strengthening trust and communicating the functional benefits of digital payments in agricultural transactions.

LITERATURE REVIEW

Digital Transformation and Innovation in Behaviour

Digital transformation is the process by which organizations and economic actors integrate digital technology into all aspects of their operations to fundamentally change the way they create value, provide services, and interact with customers (Vial, 2019). In the context of the digital economy, digital transformation does not stop at the application of new technologies but also implies innovation in business models, operating processes, and market participants' behaviors. Digital payment represents a specific manifestation of digital transformation because it changes the manner in which small-scale business entities conduct and manage transactions. From the innovation perspective, digital payments represent a form of process innovation and transaction model innovation, as traditional cash payment methods are replaced or complemented by digital solutions such as e-wallets, mobile transfers, and QR code payments. Recent studies have shown that innovation in payment systems not only helps reduce transaction costs but also improves the speed, flexibility, and market scalability of small and micro enterprises (OECD, 2020; World Bank, 2025). For households trading in clean agricultural products, innovation in payment methods can create better conditions for connecting with consumers, improve transparency, and support building market trust in products. From a technology adoption perspective, the intention to use digital payments represents a behavioral dimension of digital transformation at the micro-business level (Davis, 1989; Venkatesh et al., 2003). For household businesses, this intention reflects their willingness to integrate digital payment into routine transactions rather than merely the availability of digital infrastructure. According to Vial (2019), digital transformation becomes meaningful when economic actors change their behavior and decision-making through the integration of digital technologies rather than merely formally adopting the technology.

In addition, studies on market-centric innovation emphasize the role of customer demand as a driving force for innovation and digital transformation (Quynh, 2025). As consumers become increasingly familiar with digital payment forms, pressure from customers forces business households to innovate transaction methods to remain competitive (Oliveira et al., 2016; Nghi & Dung, 2019). In this context, customer demand not only serves as an external factor that influences behavioral intent but also as a mechanism for spreading innovation in the local business community. In addition, trust and social influence may influence the adoption of digital payment through different mechanisms. Trust concerns confidence in the payment system and service providers, whereas social influence reflects perceived expectations or norms from people and business networks surrounding the household business. Digital transformation in payments is directly related to cash flow and financial data; therefore, the level of trust in technology systems, service providers, and legal frameworks is a necessary condition for business households to embrace innovation (Gefen et al., 2003; Putrevu & Merzanis, 2024). In the Mekong Delta, the business of clean agricultural products is highly communal and highly dependent on sellers and

buyers. Therefore, the analysis of the intention to choose electronic payment of clean agricultural product business households not only contributes to explaining the behavior of accepting technology but also helps clarify the mechanism of digital transformation and innovation at the single-level household economic level, which is still poorly studied in the current literature. In summary, this study considers the intention of business households to choose digital payment as a specific manifestation of the digital transformation process in clean agricultural product transactions based on the theoretical foundation of technology acceptance, innovation, and digital transformation.

Digital payment from the perspective of innovation and digital transformation

In the digital economy, cashless payments are increasingly seen as a fundamental form of innovation, contributing to the restructuring of the way economic transactions are conducted. Unlike tangible product innovations, digital payments represent process innovation and transaction model innovation, in which digital technologies allow economic actors to make transactions faster, more flexibly, and at a lower cost than traditional cash (OECD, 2020; World Bank, 2025). From the perspective of digital transformation, cashless payments are not only the application of a new technology but also reflect a profound change in economic actors' behavior, mindset, and operational structure (Putrevu & Merzanis, 2024). According to Vial (2019), digital transformation only occurs when digital technology is integrated into core processes and leads to a change in the way value is created. In this context, the choice of digital payments instead of cash payments reflects the level of participation of business households in the digital transformation process, thereby reflecting the shift from traditional business practices to digital-based transaction models (Quynh, 2023; Quynh, 2025; Quang, 2025a).

Recent studies have shown that innovation in payment systems has a strong spillover impact on microeconomic performance, especially for small and household businesses (Nhung et al., 2023; Quynh, 2023). In the digital environment, digital payments simplify the revenue and expenditure process, improve cash flow management, and expand customer access (Oliveira et al., 2016; Putrevu & Merzanis, 2024). In the context of developing markets, where the household economic sector accounts for a large proportion, the adoption of innovations in payment is a key factor in improving competitiveness and adapting to market changes (Quynh, 2025). However, innovation and digital transformation in payments do not occur automatically. Studies on technology adoption indicate that cognitive, social, and psychological factors influence the decision to choose digital payments (Nghi & Dung, 2019; Monsurat et al., 2023). The perception of the usefulness of digital payments reflects the extent to which business households believe that this innovation can improve operational efficiency. In addition, market pressures and customer demand act as a mechanism to promote innovation, as business households are forced to adjust their transaction methods to meet consumers' growing expectations in the digital economy (Venkatesh et al., 2012). At the same time, trust in the payment system and social influence from the business community and the surrounding environment contribute to reducing uncertainty and encouraging business households to participate in the digital transformation process (Gefen et al., 2003; Rogers, 2003).

RESEARCH METHOD

Research theory

In the context of innovation and digital transformation, digital payments are not just a technical tool but a transactional process innovation that helps change the way business entities create value and interact with customers (Alrawad et al., 2023; Quynh, 2025). At the micro level, a business household's choice of digital payment instead of cash is often determined by behavioral

intent (Khuyen, 2023; Quynh, 2025). TAM provides the theoretical basis for linking perceived usefulness to household businesses' intention to choose digital payments, as businesses are more likely to adopt a technology when they perceive that it improves their transaction-related activities (Davis, 1989). According to theories of technology acceptance, behavioral intent is the central variable that predicts behavior using technology and is the basis for explaining why the same technological infrastructure but the level of acceptance varies between groups of people (Davis, 1989; Venkatesh et al., 2003; Venkatesh & David, 2000). In this study, UTAUT provides a theoretical basis for examining the social dimension of digital payment intention through social influence. However, customer demand is not treated as an original UTAUT construct; rather, it is incorporated as a contextual, market-driven factor reflecting customers' direct preferences and expectations for digital payment options. For households in the Mekong Delta that trade in clean agricultural products, the decision to choose digital payment is simultaneously affected by: (i) Perception of benefits and efficiency (PU), (ii) Pressure and demand from customers in the digital market (CD) environment, (iii) Trust in the payment service system (T), and (iv) Social influence from the business/social relations (SI) community. Recent studies on e-wallets and mobile payments in emerging economies have shown that these factors play a significant role (Alrawad et al., 2023; Moghavvemi et al., 2021; Yang et al., 2021; Quynh, 2025).

Perceived Usefulness (PU) and Digital Payment Intent

PU is the degree to which a business household believes that digital payments help improve transaction and operational efficiency (Davis, 1989). In the context of business households, PU is often shown through specific benefits such as: (1) shortening payment time, (2) reducing errors in revenue and expenditure, (3) easy to track revenue and cash flow, and (4) supporting better customer service (Quynh, 2023**;** Dahlberg et al., 2008). The central role of PUs in the adoption of digital payments is reinforced by recent evidence. For instance, research on e-wallet adoption intent has shown that PU is an important predictor of usage intent (Yang et al., 2021). For household businesses, perceived usefulness reflects the extent to which digital payments are perceived to improve transaction efficiency, facilitate customer transactions, and support routine business activities. Businesses are more likely to report a stronger intention to choose digital payments when they perceive these functional benefits (Davis, 1989; Quynh, 2023).

H1: Perceived Usefulness (PU) is positively associated with household businesses' intention to choose digital payments.

Customer Demand (CD) and Digital Payment Intent

In this study, CD refers to the extent to which household businesses perceive that their customers prefer, request, or expect digital payment options during transactions. Unlike social influence, which reflects interpersonal or community-based expectations, customer demand represents direct market pressure from customers. CDs represent market dynamics that drive innovation: as customer tastes and behaviors change toward digitalization, business households are forced to innovate payment methods to maintain sales and competitiveness (Nhung et al., 2023; Quynh, 2023; Quang, 2025b). From a UTAUT perspective, CDs can be seen as a concrete, more market-oriented expression of social pressure from stakeholders in a business context (Venkatesh et al., 2003). Empirical evidence on the merchant side shows that market/customer factors play an important role in the decision to accept mobile payments; if customers tend to use digital payments, merchants will have a stronger incentive to implement (Moghavvemi et al., 2021). Therefore, customer demand can provide a market-driven incentive for household businesses to consider digital payment options as part of their routine transactions. Accordingly, when household businesses perceive stronger customer preferences or requests for digital payment, they may have

greater intention to provide and adopt such payment options.

H2: Customer Demand (CD) is positively associated with household businesses' intention to choose digital payments.

Trust (T) and the intention to choose digital payments

Trust (Trust T) is the trust of business households in: (1) the safety and stability of the payment system, (2) the capacity and reputation of the provider (banking/fintech), and (3) the ability to protect users when problems arise. In digital transactions, money and data uncertainty makes trust a particularly important condition for forming choice intentions (Quan & Hien, 2022; Alrawad et al., 2023; Quang, 2025a). Recent studies have confirmed that trust is a factor that significantly influences the intention to use digital payments. Research on NFC mobile payment systems shows that trust has a strong impact on intention to use, while helping to reduce psychological barriers to technology adoption (Alrawad et al., 2023; Hasddin et al., 2025). For business households, trust is also associated with the belief that money will go to the right account, transactions will not be error-free, and there is a mechanism to support/resolve disputes when needed. These findings support the relevance of trust in explaining digital payment intention, particularly when transactions involve financial information and perceived uncertainty.

H3: Trust (T) is positively associated with the intention of household businesses to choose digital payments.

Social Influence (SI) and Digital Payment Choice Intent

In the context of household businesses, social influence reflects perceived expectations regarding digital payment adoption from peers, business networks, and the surrounding community. When such social expectations are perceived as supportive of digital payments, household businesses may develop stronger intentions to choose digital payment methods. Social Influence (SI) is the degree to which a business household perceives that important people (friends, family, other business households, partners, small business community, or local transaction "norms") expect or encourage them to use digital payments (Hien et al., 2023; Quang, 2025a; Quang & Hong, 2025). In the small-scale business community, the contagion and imitation effect is often strong: when many around them adopt successfully, the individual tends to believe that it is the "right" choice and reduces fear of change (Rogers, 2003). In the study of e-wallets, SI is often noted as a driver of intention to use, especially in the context of emerging economies where community norms and WOM strongly influence acceptance behavior (Pulukadang, 2025; Yang et al., 2021). For clean agricultural product business households in the Mekong Delta, SI can come from a network of small businesses, markets/POS, local business communities, or the spread of the QR scanning model (Hien et al., 2023; Quang, 2025b).

H4: Social Influence (SI) is positively associated with the intention of household businesses to choose digital payments.

Research models

Based on the theoretical foundations of technology adoption, innovation, and digital transformation, combined with the practical context of clean agricultural products business households in the Mekong Delta, this study proposes a research model to analyze the factors influencing business households' intention to choose electronic payments that are adjusted to reflect the business environment and local market characteristics.

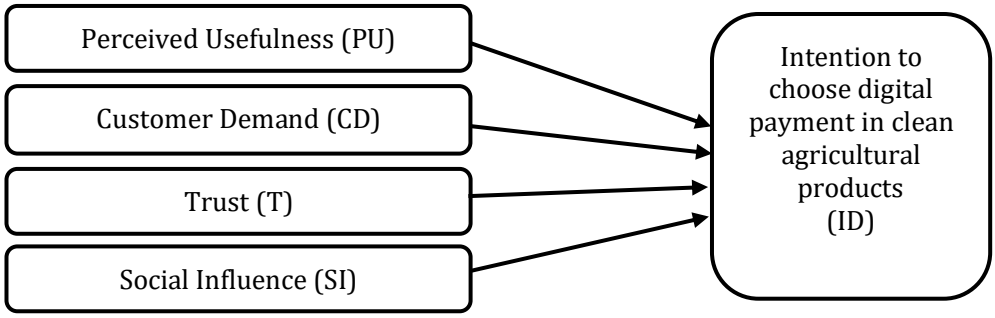

Figure 1. Conceptual framework

Research methods

The study was implemented in two phases, combining qualitative and quantitative methods to ensure the scale's reliability and relevance and the research model's relevance in the context of clean agricultural products business households in the Mekong Delta.

Phase 1: Preliminary research is conducted to review, adjust, and complete the scales inherited from previous studies on electronic payment acceptance and technology use behavior. The observation variables are adjusted through focused group discussions with clean agricultural product business households to ensure clarity, understandability, and relevance to the actual business context in Vietnam. The results of this phase form the basis for the formulation of a formal survey questionnaire for quantitative research.

Phase 2: Formal research is conducted to validate the research model and proposed hypotheses. Data were collected through a survey questionnaire , using a 5-level Likert scale (1 = "Strongly disagree" to 5 = "Strongly agree") to measure the following variables: perceived usefulness, customer demand, trust, social influence, and the intent to choose digital payments. The survey subjects are households trading in clean agricultural products in Can Tho city and Vinh Long province that are using or intending to use digital payment forms in business activities.

The sample size was determined based on the recommendation of Hair et al. (2010), whereby the minimum number of observations should be achieved according to the formula $n \geq 5 \times m + 50$, where m is the number of observed variables ($n \geq 5*22+50 = 160$). Given the number of variables observed in the study model, the minimum sample size was 160. In this study, 290 valid survey panels were collected and used for analysis, meeting the sample size requirements and ensuring the reliability of the PLS-SEM method.

Targeted and controlled sampling is applied, focusing on business households (clean agricultural products) that are actually operating at markets, shops, and points of sale of clean agricultural products. The data collection process is designed to ensure the diversity of demographic characteristics of business households, such as age, gender, and business experience, thereby reflecting the research context and access to digital payments of the survey subjects. The collected data were analyzed using the smallest partially squared linear structure model (PLS-SEM) via SmartPLS software.

This approach is suitable for exploratory research, has many potential variables, does not require standardized distribution data, and is targeted at predicting behavior (Hair et al., 2011; Hair et al., 2013). The research locations were selected in Can Tho city and Vinh Long province, the socio-economic center of the Mekong Delta. This city has a rapid development rate in banking services and digital payments, and at the same time, many households are trading in clean agricultural products, creating favorable conditions for analyzing the behavior of choosing electronic payments in the digital transformation process at the business household level. However, this study has some limitations. The survey was conducted only in Can Tho city and Vinh Long province, making it difficult to generalize the results for the entire Mekong Delta region or other regions of Vietnam,

especially in remote rural or remote areas where electronic payment infrastructure is still limited. Therefore, future studies should expand the scope of the survey to other localities to improve the representativeness and generalization of the research results.

FINDINGS AND DISCUSSION

The survey results were compiled from 290 valid response sheets of clean agricultural product business households in Can Tho city and Vinh Long province. The sample structure shows a relatively balanced distribution and is consistent with the study subjects' characteristics. In terms of gender, women accounted for 56.9% (165 households) and men accounted for 43.1% (125 households). This rate is relatively close to the reality when many clean agricultural product business households are directly managed by women or participate in decision-making in daily business activities. Regarding the age of business owners, the survey sample focuses mainly on the main working age groups, with experience and independent decision-making ability in business activities. Specifically, the age group of 25–34 accounted for 24.8% (72 households), the group of 35–44 accounted for 34.1% (99 households), the group of 45–54 accounted for 27.6% (80 households), and the group aged 55 years and over accounted for 13.5% (39 households). This structure shows that most clean agricultural product business households are run by middle-aged people with practical experience and a high level of stability in business activities. In terms of business experience, most households have been operating for more than 5 years, reflecting a long-term attachment to the agricultural product business and a relatively complete understanding of transaction and payment methods in practice. This is an important basis for reliably assessing the research subjects' intention to choose electronic payment.

The survey results show that the majority of business households have used or are using at least one form of digital payment, such as bank transfer, QR code payment, or e-wallet, in terms of access to and use of digital payments. Simultaneously, a significant proportion of households do not use it regularly but express their intention to switch from cash payment to digital payment, reflecting a clear trend in the transaction method of local clean agricultural product business households. The data were collected mainly in Ninh Kieu ward, Cai Rang ward in Can Tho city and Thanh Duc ward, Long Chau ward in Vinh Long province, which are areas with many clean agricultural products markets, shops, and points of sale. These are also areas with a relatively high level of development in terms of banking infrastructure and electronic payment services, facilitating the study of business households' behavior and intention to choose digital payment.

Table 1. Construct reliability validity

Factor	VIF	CA	rho_A	CR	AVE	Outer Loadings
CD	1.529 – 1.944	0.820	0.822	0.881	0.649	0.767 – 0.839
ID	1.565 – 3.292	0.859	0.875	0.905	0.705	0.737 – 0.886
PU	1.472 – 2.138	0.849	0.851	0.893	0.626	0.721 – 0.834
SI	1.956 – 2.579	0.892	0.892	0.920	0.698	0.809 – 0.856
T	2.156 – 2.653	0.882	0.892	0.918	0.737	0.828 – 0.860

Source: Survey data of the author

In PLS-SEM analysis, the evaluation of the measurement model plays a pivotal role in ensuring that the underlying structures are reliably and validly measured before considering the structural model's causal relationships. The outer loadings, which reflect the extent to which each observed variable represents a corresponding underlying concept, are an important criterion in this stage. According to Fornell and Larcker (1981), the observed variables are considered satisfactory when the load factor is greater than 0.70, indicating good indicator reliability and a

sufficiently large interpreted variance ratio. The results of the analysis showed that all the variables observed in the model had an external load factor that exceeded the recommended threshold, confirming that the scales used appropriately reflected the underlying structures, including perceptions of usefulness, customer needs, trust, social impact, and intention to choose electronic payments. This provides empirical evidence that the measurement model achieves indicator reliability and is suitable for further analyses. In addition, the discriminant validity of the research structures was tested using the HTMT standard, which is considered a rigorous and reliable evaluation method in PLS-SEM.

As recommended by Hair et al. (2019), HTMT coefficients of less than 0.90 indicate that the concepts in the model are clearly differentiated and do not overlap in terms of content. The HTMT values were all within the acceptance threshold, ranging from 0.823 to 0.876. In addition to evaluating the measurement model, the explanatory capacity of the model is considered through the R^2 determination factor in the structural model. A high R^2 value indicates that the model's independent variables explain most of the variation in the intention to choose digital payments, thereby reflecting the research model's relevance and good predictability.

Table 2. Results of Fornell – Larcker

	CD	**ID**	**PU**	**SI**	**T**
CD	0.806				
ID	0.802	0.840			
PU	0.879	0.868	0.791		
SI	0.843	0.850	0.881	0.835	
T	0.814	0.921	0.888	0.942	0.859

Source: Survey data of the author

According to Hair et al. (2022), the R^2 determination factor was used to assess the extent of the model's interpretation, with reference thresholds of 0.25 (low), 0.50 (mid-range), and 0.75 (high-level). In this study, the electronic payment choice intent (ID) dependent variable achieved a value of $R^2 = 0.872$ and a corrected $R^2 = 0.870$, suggesting that independent variables in the model explained approximately 87.2% of the variation in bar selection intent. The R^2 value obtained significantly exceeded the threshold of 0.75, reflecting the very high explanatory capacity of the research model. This result shows that the proposed model has a good relevance and strong predictive ability for the behavior of business households to choose digital payments, and at the same time confirms the relevance of the factors included in the model in the context of the study.

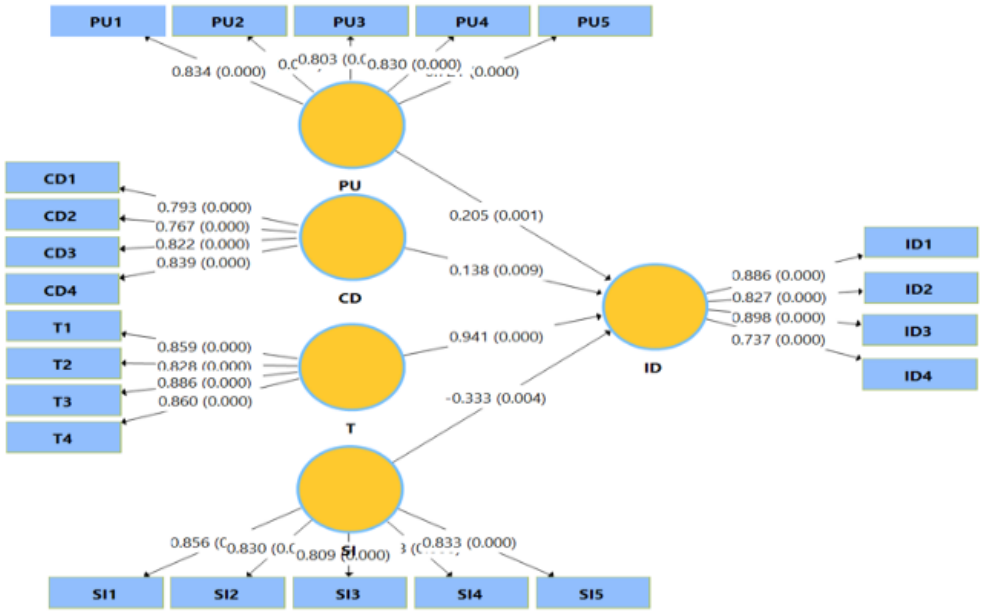

Figure 2. PLS-SEM path model

According to Hu and Bentler (1999), the model is considered to have an acceptable level of relevance when the SRMR (Standardized Root Mean Square Residual) is less than 0.08. The results of the analysis in this study showed that the SRMR of the saturation model reached 0.077 and the SRMR of the estimated model reached 0.075 both below the recommended threshold. This shows that the study model is well matched with the empirical data and that no significant deviation exists between the observed and estimated covariance matrices. In addition, the multi-linear phenomenon is examined using the VIF index. The results showed that all variables in the model had VIF values ranging from 1.529 to 3.428, which is below the VIF alert threshold < 5 recommended by Hair et al. (2019). Therefore, the model does not suffer from multilinear problems, and the estimates in the structural model are stable and reliable. After assessing model suitability and the stability of the estimates, a bootstrap analysis was conducted to test the statistical significance of the hypothesized relationships in the structural model. The bootstrap results showed that all path coefficients were statistically significant at the 5% level, although the direction of the social influence relationship was opposite to the hypothesized direction. These results provide empirical evidence for evaluating the structural model's hypothesized relationships.

Table 3. Path analysis (PLS-SEM)

	O	M	STDEV	|O/STDEV|	P values
CD -> ID	0.138	0.136	0.053	2.600	0.009
PU -> ID	0.205	0.207	0.063	3.227	0.001
SI -> ID	-0.333	-0.326	0.117	2.847	0.004
T -> ID	0.941	0.934	0.116	8.084	0.000

Source: Survey data of the author

The results of the Bootstrap analysis in the PLS-SEM model show that independent variables including perception of usefulness (PU), customer demand (CD), social influence (SI) and trust (T all have a statistically significant impact on the intention to choose electronic payment (ID) of

business households in clean agricultural product transactions. However, statistical significance did not imply support for all hypotheses because the direction of the social influence relationship was negative rather than positive. Among the examined predictors, trust (T) showed the strongest positive association with the intention to choose digital payment ($\beta = 0.941$, $t = 8.084$, $p < 0.001$). These results show that trust plays a central role in business households' decision to accept digital payments, especially in the context of clean agricultural transactions, where perceived risks related to information security and payment system reliability remain major concerns. When business households have high confidence in the safety, transparency, and stability of digital payment methods, they tend to switch from traditional to digital payments. Next, Perceived Usefulness (PU) had a positive and statistically significant association with the intention to choose digital payment ($\beta = 0.205$, $t = 3.227$, $p = 0.001$). This reflects that when business households realize that digital payments help save time, reduce transaction costs, and improve cash flow management efficiency and convenience in business, they tend to increase their intention to use it. These results are consistent with studies on technology adoption, confirming the role of functional interests in driving the adoption of digital payment solutions.

Besides, Customer Demand (CD) also showed a positive and statistically significant association with the intention to choose digital payment ($\beta = 0.138$, $t = 2.600$, $p = 0.009$), although its coefficient was smaller than those of PU and T. This finding shows that the increase in the demand for non-cash payments from consumers acts as an external motivator to motivate business households to adjust payment methods to meet customer expectations and remain competitive. Notably, social influence (SI) has an inverse impact on the intention to choose digital payment ($\beta = -0.333$; $t = 2.847$; $p = 0.004$). Social influence was negatively associated with digital payment intention in the study context. Thus, a stronger perceived social influence was associated with a lower intention to choose digital payments, contrary to the hypothesized positive relationship. One possible explanation is that business relationships in the study context may still rely heavily on established habits, personal trust, and direct transactions. Under such conditions, prevailing social norms may reinforce traditional payment practices and create resistance to changing payment methods. Overall, among the predictors examined, trust showed the strongest positive association, while customer demand and perceived usefulness were also positively associated with digital payment intention. In contrast, social influence showed a statistically significant negative association, contrary to the hypothesized direction.

CONCLUSIONS

This study aims to analyze the factors influencing the intention to choose electronic payment in clean agricultural product transactions of business households in the Mekong Delta, in the context of the commercial sector's strong digital transformation and innovation. Based on the survey data and analysis using the PLS-SEM method, the research results show that the perception of usefulness, customer needs, trust, and social influence have a significant impact on the intention to choose electronic payments, thereby confirming the suitability of the proposed research model. Among the factors considered, trust has the strongest impact on business households' intention to choose electronic payments. This result shows that trust in electronic payment systems plays a key role in promoting technology acceptance in transactions related to clean agricultural products associated with safety, transparency, and prestige. When business households believe in the security, stability, and reliability of electronic payment methods, they tend to be willing to switch from traditional payments to digital payments. In addition, the perception of usefulness has a positive and statistically significant impact on the intention to choose electronic payments. This shows that functional benefits, such as saving time, reducing transaction costs, convenience in cash flow management, and improving business efficiency, are important drivers for business

households to adopt electronic payments. Customer demand was identified as a positive impact factor, reflecting the role of market pressure in shaping business households' behavior. As consumers increasingly prefer cashless payment methods, business households tend to adjust to meet customer expectations and maintain a competitive advantage. Notably, social influences have an opposite impact on the intention to choose electronic payments.

This finding may reflect the continued relevance of traditional business habits in the study context, where established practices could transition to digital payments more difficult. The findings reflect the peculiarities of the Mekong Delta region, where business relationships rely heavily on acquaintances, direct transactions, and personal trust, requiring more time and appropriate support to change payment methods. From the above results, the study makes an academic contribution to supplementing empirical evidence on the factors that determine business households' intention to choose electronic payment in the context of clean agricultural products in a developing economy. Theoretically, the study extends the technology-adoption perspective by incorporating customer demand as a market-driven factor alongside perceived usefulness and trust, while showing that social influence may operate differently from conventional UTAUT expectations in a household-business context.

LIMITATION & FURTHER RESEARCH

Although this study provides empirical evidence regarding the determinants of the intention of household businesses to adopt digital payment in clean agricultural product transactions, several limitations should be acknowledged when interpreting the findings. First, the study was conducted exclusively in the Mekong Delta region of Vietnam Although this region represents one of the country's most important agricultural production areas, its socioeconomic characteristics, business practices, and digital infrastructure may differ from those of other regions. Consequently, the findings' generalizability to other geographical contexts should be interpreted with caution. Second, the proposed research model focuses primarily on perceived usefulness, customer demand, trust, and social influence. Although these factors significantly explained digital payment intention, other potentially influential determinants, such as perceived risk, government support, digital literacy, financial capability, facilitating conditions, and technology readiness, were not incorporated into the model. Third, the study employed a cross-sectional research design based on self-reported survey data, which captures respondents' perceptions at a single point in time and may not fully reflect changes in digital payment adoption behavior as digital transformation continues to evolve. Future research should extend this study by collecting data from different regions or countries to improve the findings' external validity and generalizability. Longitudinal research designs are also recommended to examine how digital payment intentions and adoption behaviors of household businesses change over time. Future studies could also compare current users, potential adopters, and non-adopters to better distinguish intention from actual adoption behavior. Comparative studies across different agricultural supply chains or developing economies would also strengthen the theoretical and practical implications of digital payment adoption in agricultural markets.

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